NEOMIRANDEA ALLENII, A NEW EPIPHYTIC COMPOSITE OF THE AMERICAN RAIN FOREST

R. M. KING and H. ROBINSON

Members of the Eupatorian genus *Neomirandea,* ranging from southern Mexico to Eucador, might well be called the Orchids of the Asteraceae. These usually epiphytic plants with rather succulent stems and showy inflorescences have only recently been recognized as a distinct genus (King & Robinson, 1970). Collectors have often commented, sometimes extensively, on the unusual habit of the plants, and Professor B. L. Robinson (1918) in his description of a Colombian species, *N. sciaphila* (B. L. Robinson) R. M. King & H. Robinson, mentioned the horticultural potential of the plant. It is rare that labels do not mention the vining habit, epiphytic nature, or showy reddish-purple flowers. We take occasion here to call attention to some of the interesting problems of this unique group and to describe a fourteenth species from Panama and Colombia.

The ecology of the genus *Neomirandea* presents a particularly important area for future investigation. Most of the species, even some of the largest ones, are referred to as epiphytic. The habit prompted the name *Eupatorium parasiticum* Klatt, and a collection of the type species of the genus, *N. araliaefolia* (Lessing) R. M. King & H. Robinson was described by Skutch, "shrub or small tree with branches 25 ft. long and 6 inches in diameter. Epiphytic on an oak tree, 8 ft. above ground, the roots clasping the trunk in the manner of those of a strangling fig, concrescent where touching each other. A single large root descends along the trunk to the ground. Flowers white, rare. More about this interesting plant in my journal under March 4, 1933." The new species described here is cited by Allen as "fleshy branching epiphytic shrub 1½ meters. In tops of tallest trees." The question remains, what of the few remaining members of this well marked genus not known to be epiphytic? But for their relationship, these species might never be examined properly to see

if their substrate is in any way specialized, possibly old stumps or rotten logs. Experiments with the seeds of these plants are also essential to determine what adaptation they have to their substrate.

Among the Eupatorieae, *Neomirandea* is one of the few genera of particular interest cytologically. The chromosome picture in the Eupatorieae is for the most part rather simple. Most groups show a haploid number of 10 chromosomes or multiples of that number. *Fleischmannia* normally has $n = 10$, and a few species with $n = 4$ (Baker, 1967). A whole related complex of genera which we call Ageratinoid (*Ageratina*, *Oxylobus*, etc.) shows base numbers of $x = 17$, and $x = 16$. Thus far, two species of *Neomirandea* have been counted, (Turner & King, 1964), *N. angularis* (B. L. Robinson) R. M. King & H. Robinson, $n = 25$ and *N. costaricensis* R. M. King & H. Robinson, $n = 17$ as *Eupatorium* aff. *eximium*. These two counts suggest some cytological complexity in this genus which is in some ways between the Ageratinoid complex and other members of the Eupatorieae.

The new species is represented by two collections which show a range from Central Panama to the foothills of the northern Andes in Colombia. The characters of the species are as follows:

Neomirandea allenii R. M. King & H. Robinson, sp. nov.

Frutex epiphyticus carnosus. Folia opposita majuscula subglabra integra, petiolo perbreve; laminae late ellipticae 7-9 cm. longae, 4-6 cm. latae, apice anguste obtusatae, nervis lateralibus prominulis pinnatis. Involucri squamae ca. 12 subaequilongae late lanceolatae extus parce pubescentes. Flores ca. 10 in capitulo ca. 4.5 mm. longi; corollae anguste infundibulares extus distincte glanduliferae, faucibus intus glabris; styli non nodulosi; achaenae setiferae et glandiferae inferne dense glanduliferae et setiferae; setae pappi scabrae, cellulis apicalibus setarum nonnullarum valde obtusis.

Fleshy branching epiphytic shrubs. Stems terete, minutely pubescent. Leaves opposite, petioled; petioles glabrous

ca. 5 mm. long, blades fleshy, ovate, entire, glabrous on both surfaces, up to 9 cm. long and up to 6 cm. wide, lateral veins prominent. Inflorescence a corymbose panicle. Phyllaries ca. 12, subequal, broadly lanceolate, pubescent, in 2-3 series. Receptacle flat or slightly convex, glabrous. Heads ca. 10 flowered, flowers purple or pink, ca. 4.5 mm. long (excluding style branches) corollas narrowly funnelform, lobes about as long as wide, outer surface of corolla with numerous short stalked glands, cells broadly oblong with straight walls, inner surface of corolla glabrous; anther appendages large, anther collars slender, composed mainly of rectangular to quadrate cells, walls not ornamented. Style base not enlarged, glabrous, stylar appendages not enlarged, mamillose. Achenes prismatic, 4-5 ribbed, with a few short stalked glands and uniseriate multiseptate hairs, glands and hairs numerous at base and apex, carpopodia distinct, cells quadrate, thin walled, pappus of ca. 30 scabrous setae ca. 5 mm. long, some setae with very blunt apical cells.

PANAMA: PROVINCIA DE COCLE: Region north of El Valle de Anton, alt. 1000 meters, August 21, 1946. Fleshy branching epiphytic shrub, 1½ m. In tops of tallest trees. Leaves leathery. Flowers purple, showy. *Paul H. Allen* 3643 (Holotype NY). Additional collection: **COLOMBIA:** ANTIOQUIA: Above Llano Grande, elevation 2000 m. *Earl L. Core* 497 (US).

The new species by its lack of hairs inside the corolla, and by the lack of an enlarged style base proves to be a member of the subgenus *Critoniopsis* related to *N. eximia* (B. L. Robinson) R. M. King & H. Robinson and *N. sciaphila* (B. L. Robinson) R. M. King & H. Robinson. Among the prominent distinctions of *N. allenii* are the larger leaves with prominent secondary veins, the distinct glands on the surface of the corolla, the hairs and glands near the base of the achenes, and the frequent interspersed pappus setae with very blunt apical cells.

ACKNOWLEDGEMENT

This study was supported in part by the National Science Foundation Grant GB-20502 to the senior author.

LITERATURE CITED

BAKER, H. G. 1967. The evolution of weedy taxa in the *Eupatorium microstemon* species aggregate. Taxon **16:** 293-300.

KING, R. M. & H. R. ROBINSON. 1970. Studies in the Eupatorieae (Compositae). XXI. A new genus, *Neomirandea*. Phytologia **19**(5): 305-310.

ROBINSON, B. L. 1918. A descriptive revision of the Colombian Eupatoriums. Contr. Gray Herb. **55:** 264-330.

TURNER, B. L. & R. M. KING. 1964. Chromosome numbers in the Compositae. VIII. Mexican and Central American species. Southw. Nat. **9:** 27-39.

DEPARTMENT OF BOTANY
SMITHSONIAN INSTITUTION
WASHINGTON, D.C. 20560